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(54) SECURE BOOTSTRAPPING ARCHITECTURE METHOD BASED ON PASSWORD-BASED DIGEST AUTHENTICATION

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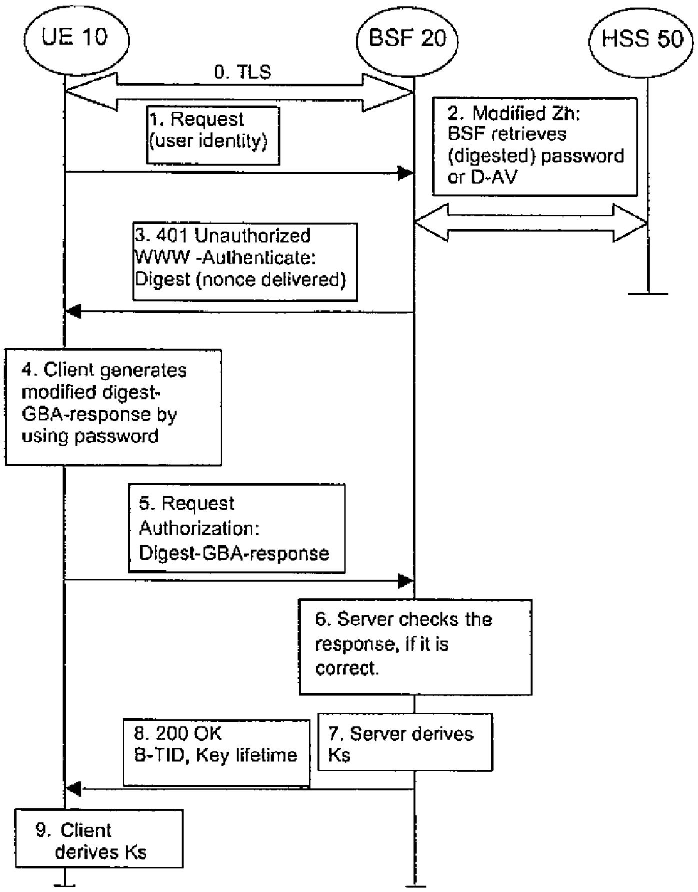
(57) ABSTRACT

A method, apparatus, and computer program product, in which a password-based digest access authentication procedure is used for performing authentication between a client and a server, wherein the authentication procedure is secured by at least one of modifying a digest-response parameter with a user password and generating a bootstrapped key based on the user password and at least one fresh parameter not used in a previous protocol run between the client and the server.


UE 10
BSF 20
HSS 50
0. TLS
1. Request (user identity)
2. Modified Zh: BSF retrieves (digested) password or D-AV
3. 401 Unauthorized WWW -Authenticate: Digest (nonce delivered)
4. Client generates modified digest-GBA-response by using password
5. Request Authorization: Digest-GBA-response
6. Server checks the response, if it is correct.
7. Server derives Ks
8. 200 OK B-TID, Key lifetime
9. Client derives Ks